

International relations in science and medicine:

Three case studies

Case #3: The Malaria Research and Training Center in Bamako, Mali

Harold Varmus

University of Edinburgh

May 9, 2013



2011: FHCRC/UCI PROJECT



50+ YEAR HISTORY OF THE UGANDA CANCER INSTITUTE

DENNIS
BURKITT

BURKITT'S
LYMPHOMA





State of the Union Address, January 28, 2003

■ President Bush
announces the
Emergency Plan for
AIDS Relief



PETER MUGYENYI, LAURA BUSH

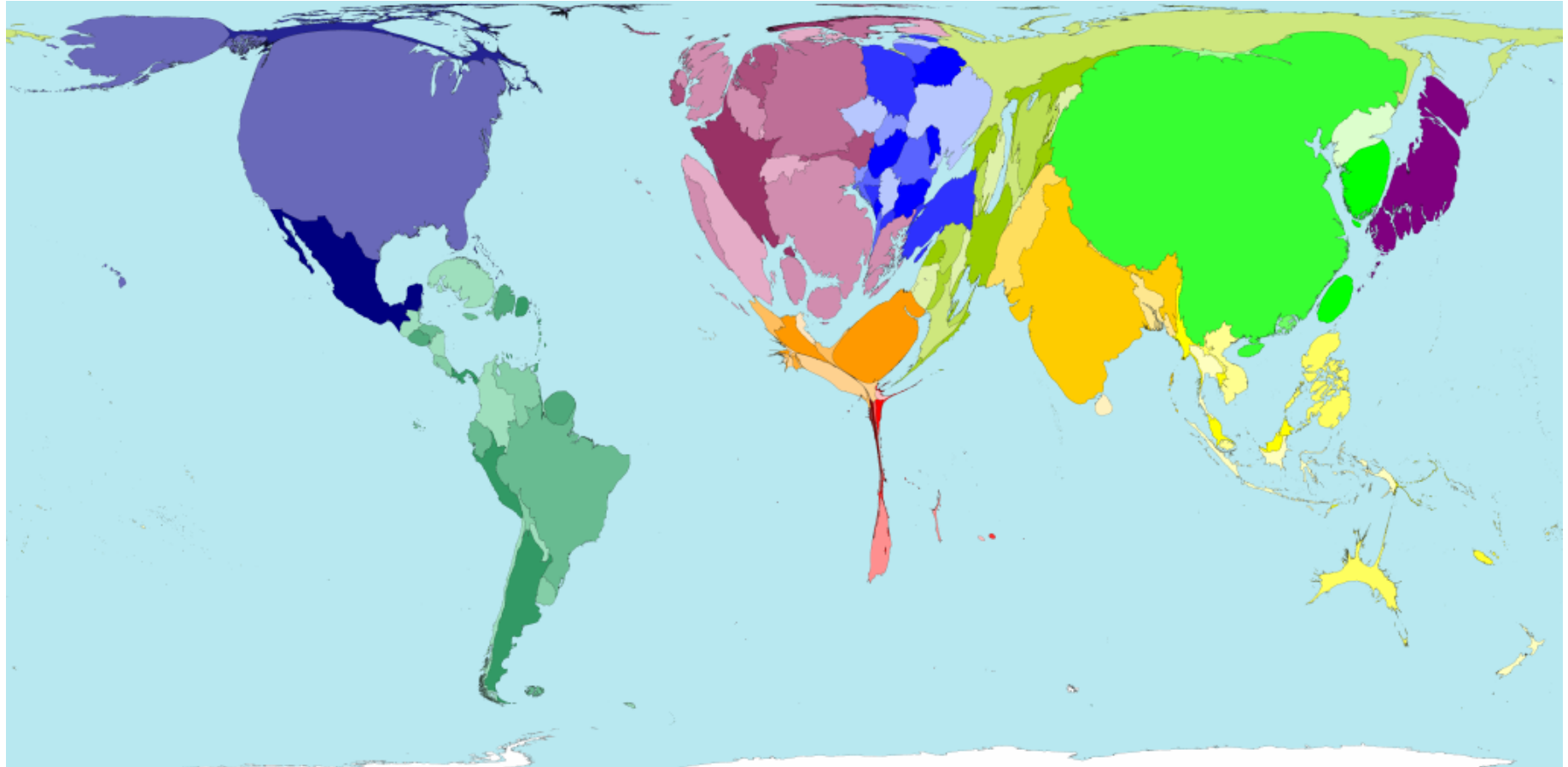
MALARIA RESEARCH & TRAINING CENTER



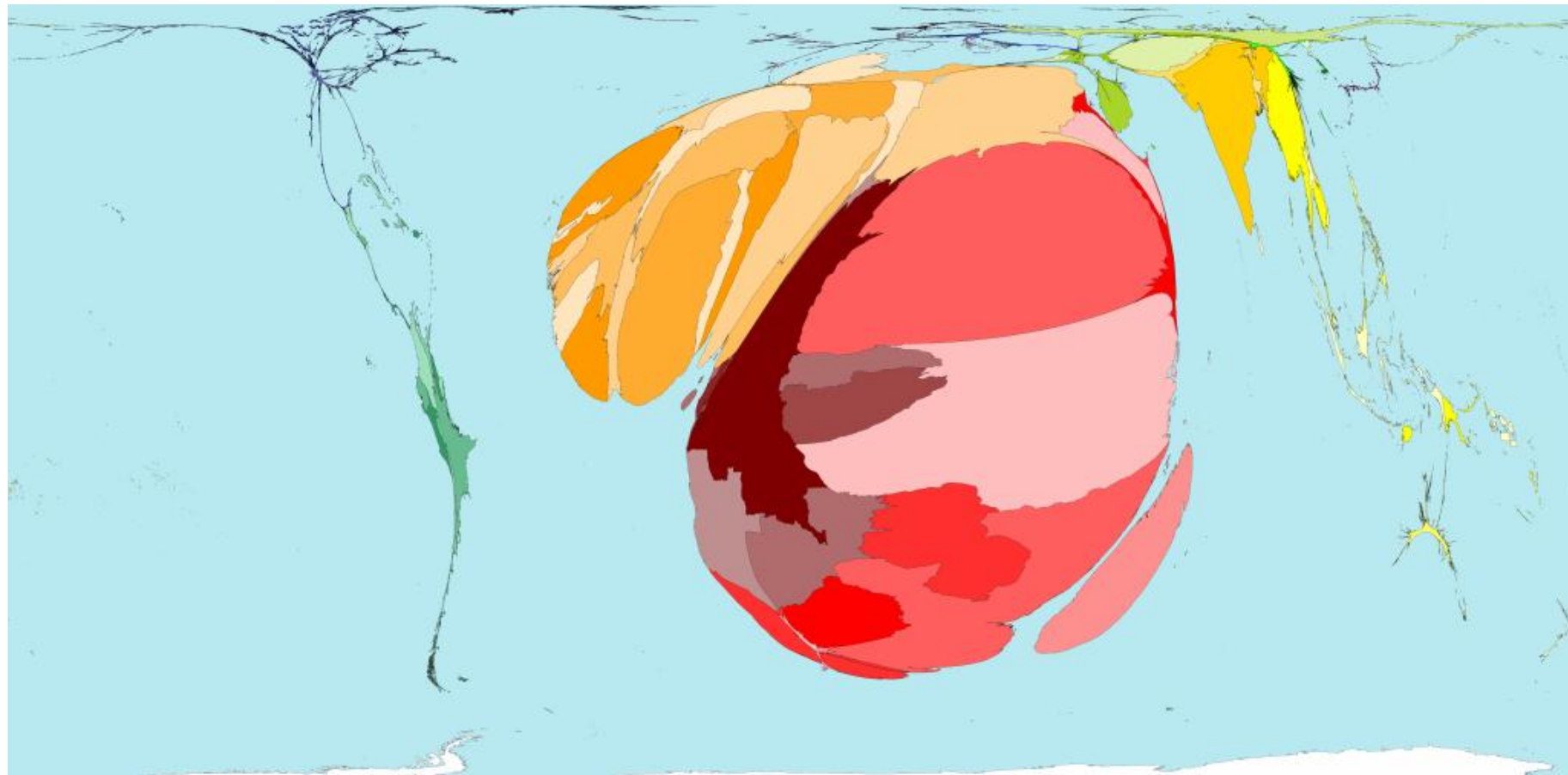
BAMAKO, MALI

**HOW A POOR COUNTRY
BECAME A LEADING FORCE IN HEALTH SCIENCES**

DISTRIBUTION OF WORKING PHYSICIANS (7.7 Million, 2004)



PROPORTION OF PEOPLE WITH MALARIA (7.2 MILLION CASES, 2003)



MALARIA RESEARCH & TRAINING CENTER



BAMAKO, MALI

A SOURCE OF NATIONAL PRIDE



Secretary of State Colin Powell and his wife learn about MRTC from Director Doumbo

DRAMATIS PERSONAE

Maliens

Europaei

Americani

TWO IMPORTANT MALIAN SCIENTISTS



Yeya Toure, PhD



Ogo Doumbo, MD

THE EUROPEANS



Mario Coluzzi (d.2011)
(with Tom Wellemers, NIH)



Philippe Ranque (d.2006)



Tore Godal

AMERICANS WHO FORGED A MALI-NIH COLLABORATION



LOUIS MILLER



ROBERT GWADZ

(Both named Chevalier of the Mali Nation)

AN AMERICAN ESSENTIAL FOR SURVIVAL OF THE MRTC



DICK SAKAI, PHD, FROM NIAID, ALSO CHEVALIER OF MALI

The NIH and the Pasteur Institute host a malaria meeting in Dakar in 1997

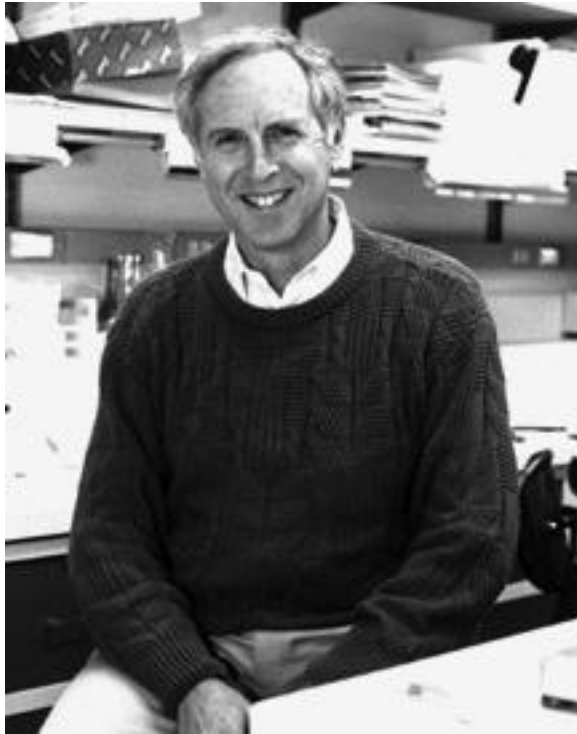


Outcome:



(<http://www.mimalaria.org/>)

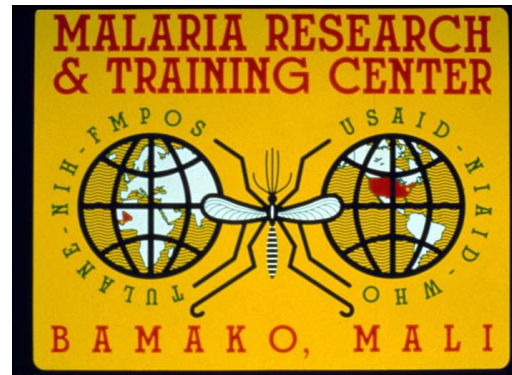
1997: AN ILLUMINATING VISIT TO BAMAKO AFTER DAKAR



LOU MILLER, NIAID



Bamako, Mali



THE CHARMS OF THE MRTC



LUNCH AT THE BANCOMANO FIELD STATION, 1997



ALPHA OUMAR KONARE, PH.D.
PRESIDENT OF MALI 1992-2002

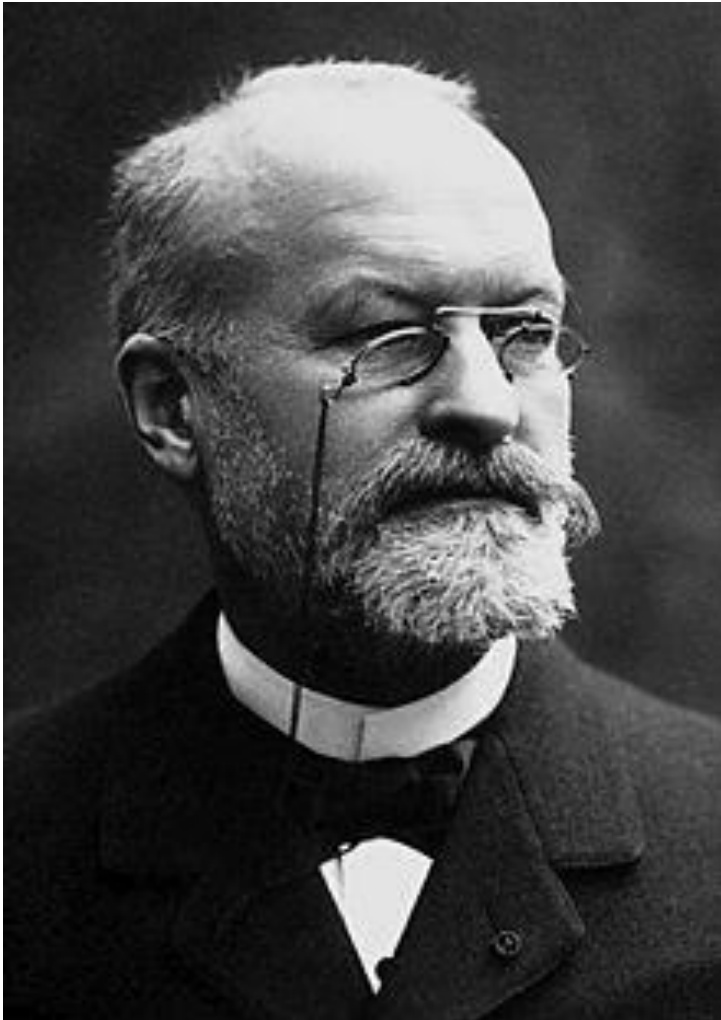
FEBRIS

Quia quodlibet febris, in se habet lachrymas
 sanguinis, etiam si non appareat, etiam
 in febribus. Melius est, uti sunt, quam
 dicitur, etiam si non sunt, etiam si non sunt.

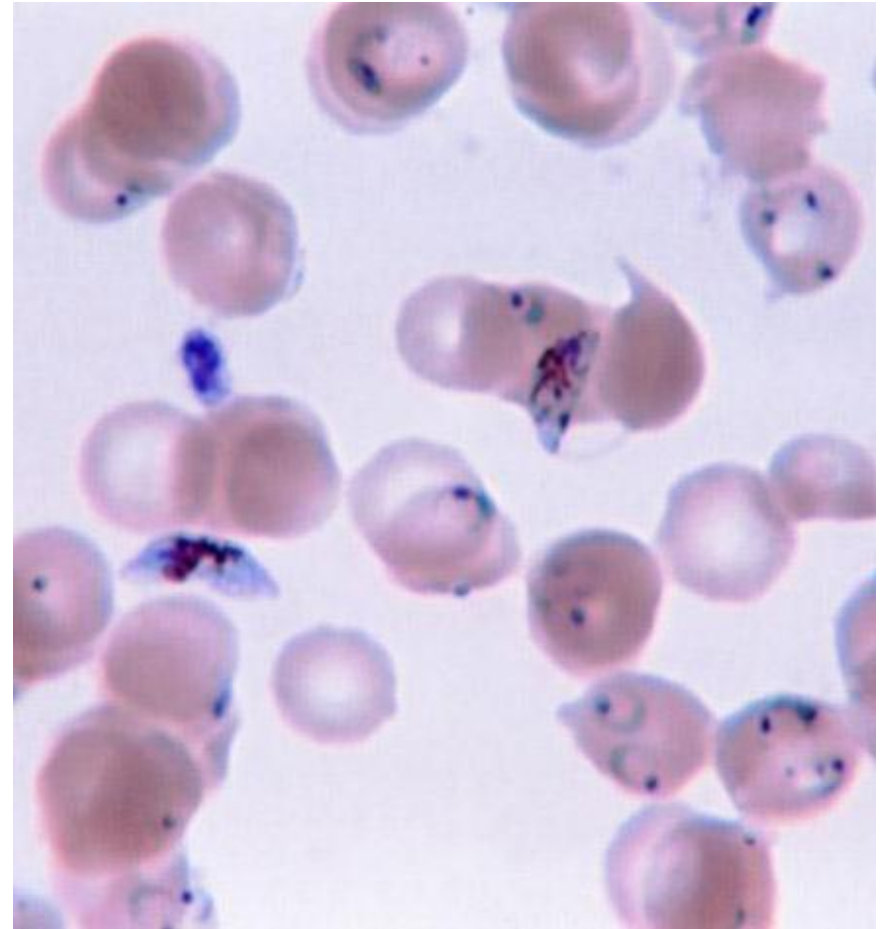
LIGNUM FEBRIUM.

Quia quodlibet latere in hunc mundum
Insuper hunc mundum quodlibet latere
In hunc mundum. Multis quodlibet hunc mundum
Dum hunc mundum latere in hunc mundum

**1880: CHARLES LAVERAN DISCOVERS PROTOZOAN AGENT
OF MALARIA WHILE WORKING IN ALGERIA**



Nobel Laureate, 1907



PLASMODIA IN BLOOD

1897: SIR ROLAND ROSS IDENTIFIES INSECT VECTOR FOR MALARIAL PATHOGEN WHILE WORKING IN INDIA



Nobel Laureate, 1902



Anopheles mosquitoes

MALI:

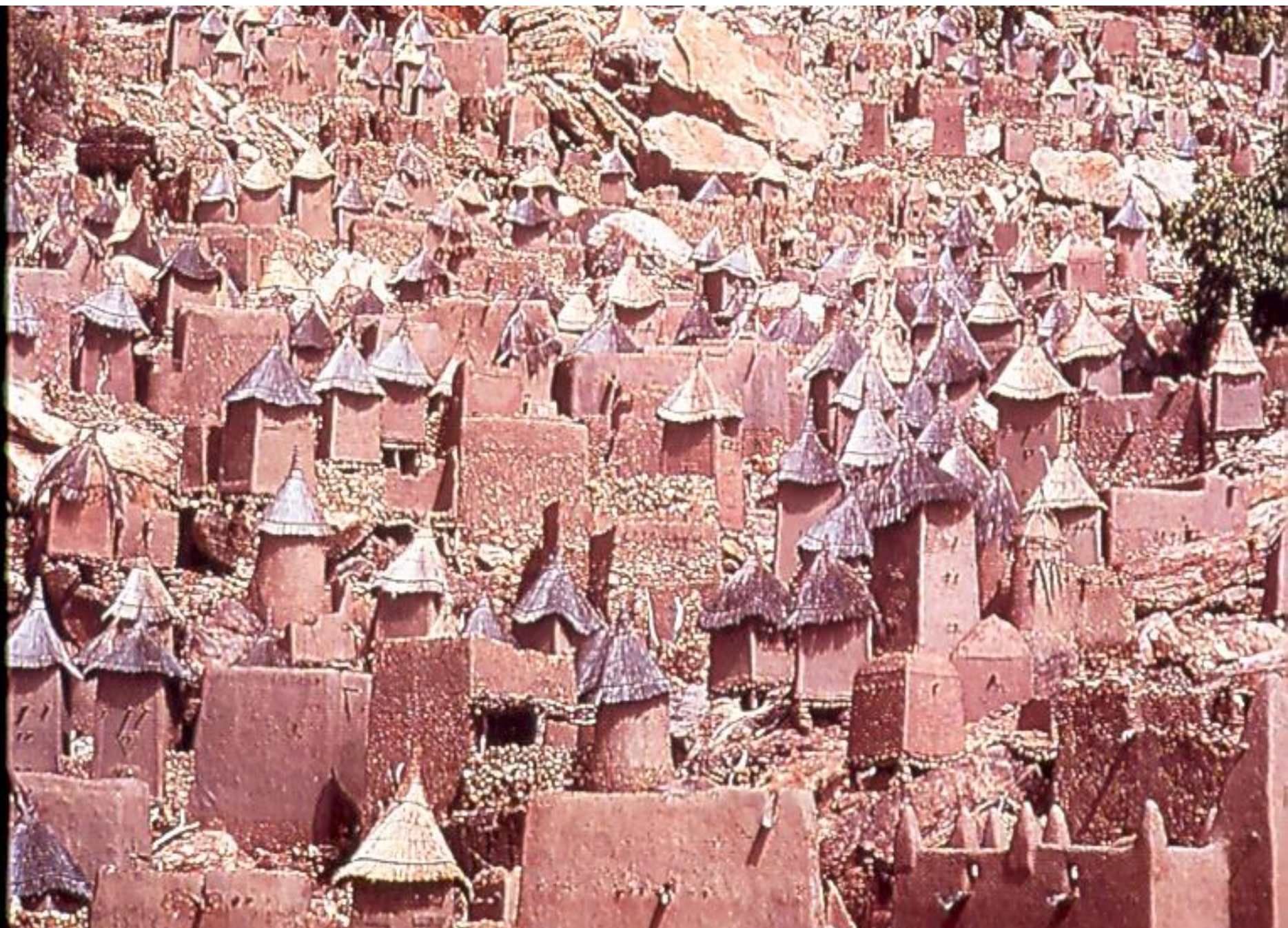
-Ancient culture,
peaked in 13th
century



A MUD BRICK MOSQUE IN DJENNE, MALI



A DOGON VILLAGE NEAR BANDIAGARA

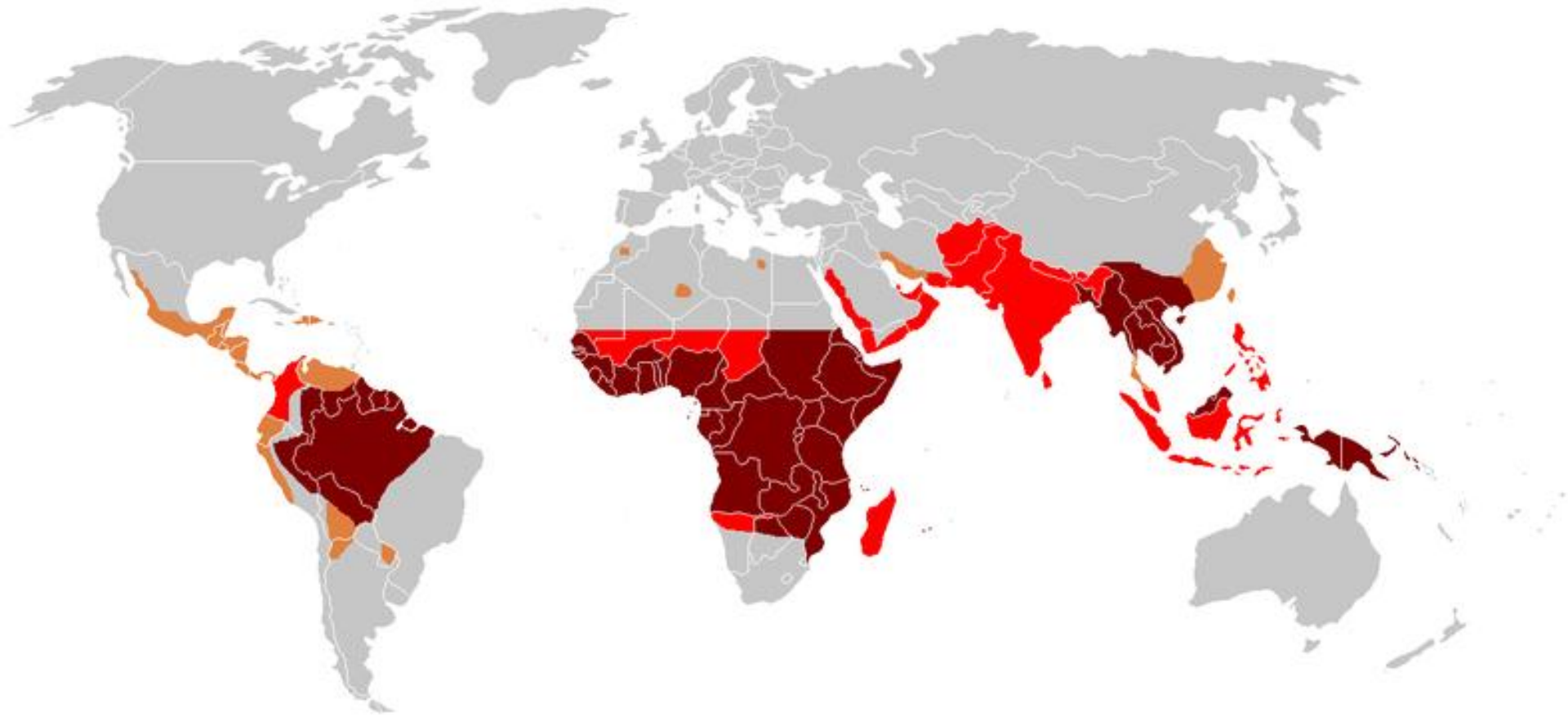


MALI:

- Ancient culture, peaked in 13th century
- Former French colony
- Independence, 1960-61
- Democracy installed, 1991-2
- Political instability, 2012-13



MALARIOUS ZONES: 2004



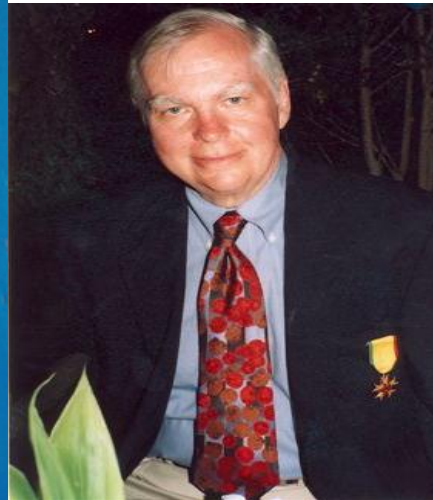
DISTINGUISHES MALARIOUS REGIONS WITH RESPECT TO
CHLOROQUINE-RESISTANT PARASITES BY COLOR

MOSQUITOES

MALARIA

MALI

MRTC



CREATING THE MRTC

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December 1998

PARASSITOLOGIA

A publication of the University of Rome "La Sapienza"
Official Journal of the Italian Society of Parasitology

Y.T. TOURE
V. PETRARCA
S.F. TRAORE
A. COULIBALY
H.M. MARGA
O. SONKORE
M. SOW
M.A. DI DECO
M. COLUZZI

The distribution
and inversion
polymorphism of
chromosomally
recognized taxa of
the *Anopheles gambiae*
complex in Mali,
West Africa



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Parassitologia

THE DEVELOPMENT OF THE MRTC

Continued research, training,
and leadership

Growth of Center staff and facilities

Support Facilities

- Biostatistics and Medical Informatics Training Lab
- Data Management and Epidemiology Unit
- Clinical lab



Training Programs to Sustain MRTC

- Advanced Degrees (PhDs and MScs) for **MRTC Scientists**
 - from University of Maryland, Tulane, University of Alabama, London School of Hygiene and Tropical Medicine
 - Malaria NIH Training Grants
 - University of Maryland 2000-2011
 - Tulane Biostatistics Dept 1999-2010
- **U.S. Students** Trained at MRTC
 - Minority Training Program
 - University of Maryland 1998-2003
 - International Clinical Research Scholars Program
 - University of Maryland 2003-2010

THE DEVELOPMENT OF THE MRTC

Continued research, training,
and leadership

Growth of Center staff and facilities

**Diversification of interests (other
parasites, HIV, TBC, etc)**

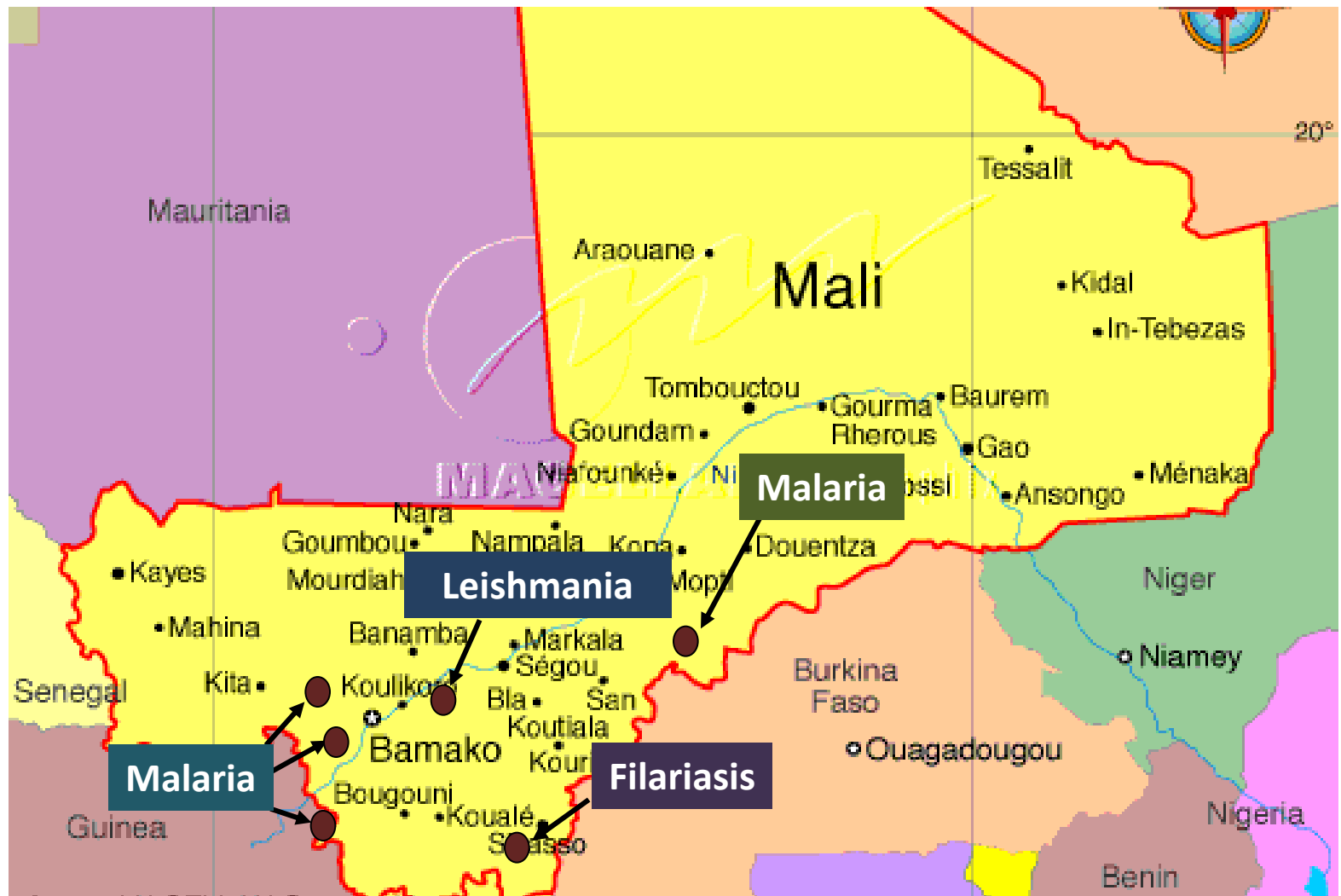
New field stations

Bancoumana Malaria Research Center

- Site of Phase 2 malaria vaccine trial
 - Malaria Vaccine Development Branch (MVDB)
 - Phase 1 trial started March 2010



Collaboration Sites Across Mali



THE DEVELOPMENT OF THE MRTC

Continued research, training,
and leadership

Growth of Center staff and facilities

Diversification of interests (other
parasites, HIV, TBC, etc)

New field stations

New sources of funds

President's Malaria Initiative (PMI)

Mali PI – Mamadou Coulibaly, PharmD, PhD & Nafomon Sogoba, PhD
NIH PI – Nick Manoukis, PhD and Jose Ribeiro, MD PhD



- **Objectives:**
 - **Monitoring the Indoors Residual Spray (IRS) operations**
 - **Integrated vector control**
 - **Training: National Malaria Control Program (NMCP)**

AN UNCERTAIN FUTURE

THE UNREST IN MALI, 2012-2013



THE NEXT GENERATION OF AMERICAN COLLABORATORS



PETER FRAMPTON, NIH, CELEBRATES PRESIDENTIAL YOUNG INVESTIGATOR AWARD WITH COLLEAGUES IN BAMAKO, 2012

THE NEXT GENERATION OF MALIAN LEADERS



DJIMBDE AT THE MRTC

CONTINUING COLLABORATIONS

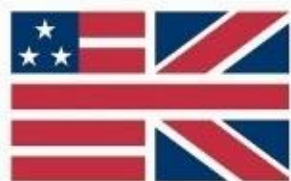


DJIMDE (MRTC) AND CHRIS PLOWE (UMB)

MALARIA RESEARCH & TRAINING CENTER



B A M A K O , M A L I



FULBRIGHT
COMMISSION

MALARIA RESEARCH & TRAINING CENTER

